



**ÖSTLING**

*Systeme für  
Produktmarkierungen*

**Operating instructions  
EU 100**

## Safety instructions



- The unit should be opened only by qualified personnel. Pull the main plug before opening the unit.
- The used electrolytes are an inorganic and organic, oxidizing appearing substance in mineral watery matrix.
- The substances are poisonous when swallowed (R25) and dangerous when in bad health(Xn).

Please read and follow electrolyte safety data sheets in accordance with 91/155/EWG.

## General Information

The described machine is designed to mark products made of steel and other electrically conductive surfaces, with electric current and electrolyte. Proper functioning and lifetime use of this product depends on the correct treatment and maintenance of the system. The operation manual and maintenance instructions must be carefully studied by all operating personnel before the system is used.

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## Liability

For any error in shipment or damage caused during shipping our liability is limited to those conditions outlined in the Terms of Delivery. The duration of warranties are described in the Terms and Conditions specified. We are not responsible for any damage caused by improper handling of equipment nor for damage caused by disregarding operating instructions as outlined in this owner's manual.

## EU - Conformity explanation

Manufacturer: ÖSTLING Markiersysteme GmbH

Address: Brosshauserstraße 27  
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Product description: Control unit

Type: EU 100

The above product is in compliance with the following European guidelines:

Number: 89/336/EWG EMC-Guidelines

Text: EN 50081-1 Generic Emission Standard  
Residential, Commercial and Light Industrial Premises

EN 50082-1 Generic Immunity Standard  
Residential, Commercial and Light Industrial Premises

The included Owner's manual is a portion of this explanation.

Manufacturer: ÖSTLING Markiersysteme GmbH

Place, Date: Solingen, 30 September 1997

Legally binding signature:



Rolf Östling

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## 1.0 Functions

The EU 100 is for marking small production series of steel and other electrically conductive surfaces. It does not matter whether the product is made of hardened steel, steam homo black finished, nickel plated, chromed, large or small, flat or round.

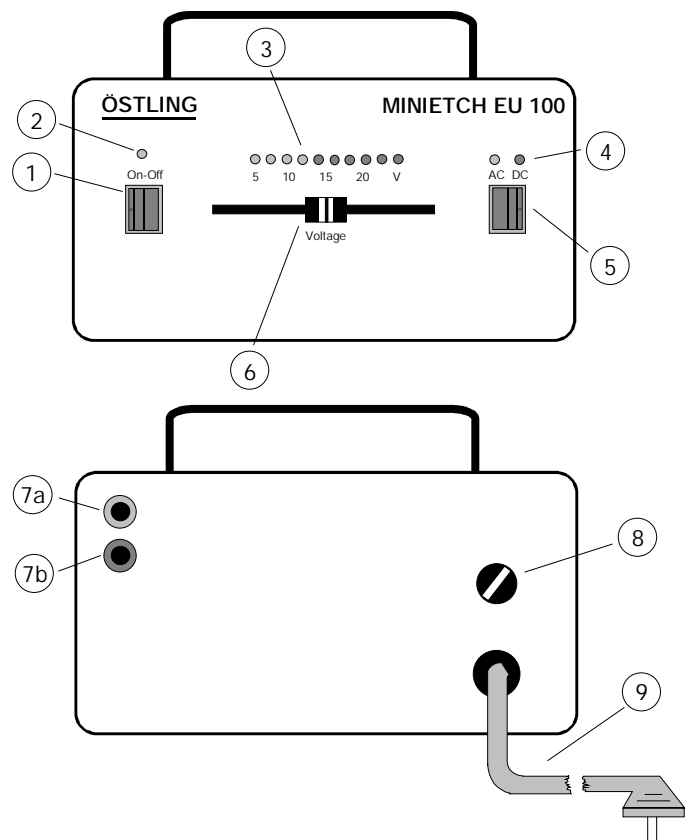
The input voltage is 115 V or 230 V (AC), the output voltage can be set from 0-24 V (AC or DC), or installed with 100 VA power.

## 2.0 Technical Data

Input voltage	115 V or 230V, AC
Output voltage	0 - 24 V (AC or DC)
Power	100 VA
Circuit breaker	T 2 A
Dimensions (L x W x H)	155 x 200 x 150 mm
EMV	EN 50081-1; EN 50082-1

## 2.1 Controls

- Pos. 1 Power on/off switch
- Pos. 2 „On“ LED indicator
- Pos. 3 Output voltage indication
- Pos. 4 „AC“/“DC“ LED indicator
- Pos. 5 AC/DC selector switch
- Pos. 6 Etching voltage adjustment
- Pos. 7a Connection – Positive cable
- Pos. 7b Connection – Negative cable
- Pos. 8 Circuit breaker T 2A
- Pos. 9 Power cord



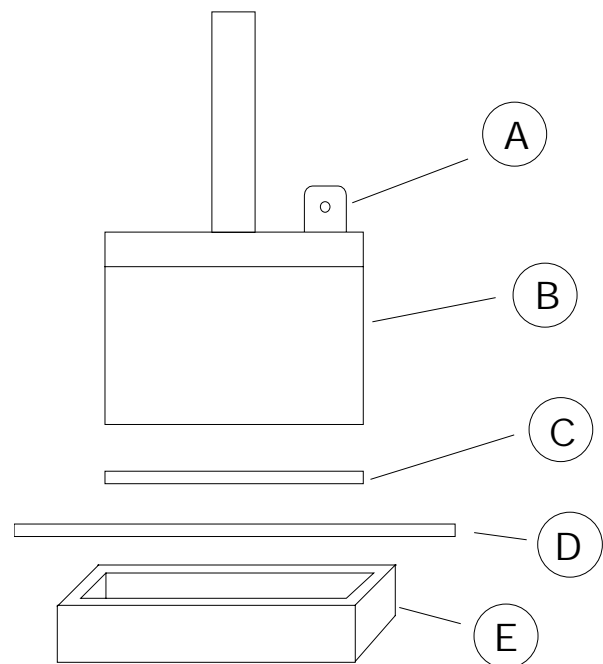
### 3.0 Programming procedure

- Plug the banana plug with the red cable in the red plug insert (Pos. 7a).
- Attach the other end of the red positive cable with the connector on the marking head (Pos. A).
- Plug the banana plug with the blue cable in the black plug (Pos. 7b).
- Put the other end of the blue negative cable on an electrically conductive base, or directly on the product.
- Plug in the power cord (Pos. 9) with 230 V AC- alternating current.

### 3.1 Preparing the marking head

Prepare a piece of black felt in the same size as the surface of the marking head. Fit a piece of conductive net (Pos. D) so that the net covers the edge of the marking head (Pos. B) approximately 15 mm. Now place the felt (Pos C) on the marking head, and place the conductive net over the felt in order that you may fasten the cassette felt (Pos. E) with the net. Slip an o-ring over the net and around the marking head so that everything is secure.

- Pos. A Connection to positive cable  
Pos. B Marking head  
Pos. C Felt  
Pos. D Conductive net  
Pos. E Cassette



### 3.2 Moistening the felt with electrolyte

Before you use the marking head we recommend that you rinse it with clean water so that the felt is soaked. After you have wrung out the felt to get rid of excess water, you may operate with the electrolyte.

### 3.3 Stencils

In order to make your own stencils quickly and professionally, ask about our customized stencil printing systems. This includes the Östling PT 220, 550, and a 24 pin printer as well as all software.

## 4.0 Marking process

- Turn on the machine (Pos. 1).
- Select AC for black / white etching or DC for deep etching (Pos. 5).
- Set your desired voltage (Pos. 6) the voltage you choose will be lit (Pos. 3).
- Place the product to be marked on a base plate or other device. Place the Stencil on the product. After that push the prepared marking head lightly on the product. The marking time normally takes 1 - 1,5 seconds for black marking.

**Hint:** After marking it is a good idea to rinse the marking head and stencil with clean water.

**Attention:** If you notice the etching quality begin to slip, re-check the felt and the conductive net. Under normal use the felt will begin to collect carbon. For this reason replace the felt as needed.

## 5.0 Maintenance

Regular maintenance of the marking machine is not necessary. If you do experience difficulty, however, please turn to our service department. Unauthorized opening of the machine will void the warranty.

## 6.0 Accessories

In order to make a more efficient operation we offer a marking station for the hand operated unit. This consists of a base plate with T - nuts, two jiggings for attaching your product, and an X-Y-Z stencil holder.

With this hand marking station, the product is laid on the affixed jiggings and the stencil is affixed properly with the X-Y-Z stencil holder.

For further technical help you may turn to our technicians in order that they may answer your specific questions about different marking heads and other accessories such as customized construction or integrating the unit into your assembly line.

## 7.0 Troubleshooting

### 7.1 Problem: No mark

**Try the following:**

- Is the power cord plugged in ?
- Are all the cables properly installed ?
- Has a voltage been set ?
- Is the circuit breaker (Pos. 8) on the back side in order ?
- Is the marking head soaked with electrolyte ?

**Please observe:**

- Electrolytic marking works for electrically conductive surfaces only.
- Laquered, anodized, or other protected surfaces cannot be marked electrolytically

### 7.2 Problem: Mark is unclear

- Make sure that the stencil is clean.
- Rinse the stencil with water to get rid of oxides.
- Make sure that the surface to the product is clean. Clean off excess dirt or oil with a dry cloth before you begin marking.

### 7.3 Problem: Black marks around the mark

The stencil has not been handled properly. It has been nicked and has a hole or is torn in some other way. In order to correct the problem the best solution is to replace the stencil. In an emergency, you may cover the holes with adhesive tape until another stencil arrives.

**Please call us when:**

- you experience technical difficulties.
- you would like sample materials marked.
- you would like more information regarding accessories such as different marking heads, felt, electrolyte, conductive net, or you need any other assistance.
- you would like information about additional Östling products such as pin marking, pad printing, lazer marking, or injet printing.





## 8.0 Electrolytes

Type of marking	Current	Voltage	Felt	Material	Electrolyte	Remarks
Black marking	AC	8 V	Black with conductive net	Stainless steel	6744, 70 ,72 ,SP1	
				Steel	676, 74 ,67/10/3, 676R74	
				Chrome , Nickel	75	
				Zink coated	639	
				Tungsten Carbide	332/2	
White marking	AC	8 V	Black with concuctive net	Black oxidized (Homp steamed)	114 Soft	Neutralize with N8
					119 Medium	
					117 Strong	
Deep marking	DC	Approx. 20-24 V	Green or grey	brass	DE20,DE40,DE90	Neutralize with N8
				aluminium	DE20,DE40,DE90	

**Electrolyte must be discarded after the marking process is complete !**

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